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Correction to "Sound Velocities of Ferropericlase in the Earth's Lower Mantle"

J. F. Lin, S. D. Jacobsen, W. Sturhahn, J. M. Jackson, J. Zhao, C. S. Yoo

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Jung-Fu Lin, Steven D. Jacobsen, Wolfgang Sturhahn, Jennifer M. Jackson, Jiyong Zhao, Choong-Shik Yoo, *Geophys. Res. Lett.*, 33, L22304, doi:10.1029/2006GL028099, 2006.

We regret that a factor of $(1/2)^{1/3}$ was mistakenly unaccounted for in converting the Debye sound velocities to km/s unit. The correct figure of the derived V_p, V_s, and G are presented here. The derived V_p, V_s, and G at ambient conditions are now lower than that of ultrasonic measurements. The difference may arise from the choice of the energy range for deriving the Debye sound velocities, in combination with the energy resolution of the partial phonon density of states in our study. Further analyses to resolve the difference are forthcoming and will be presented elsewhere. Other parts of this Letter, including the discussion, remain unchanged.

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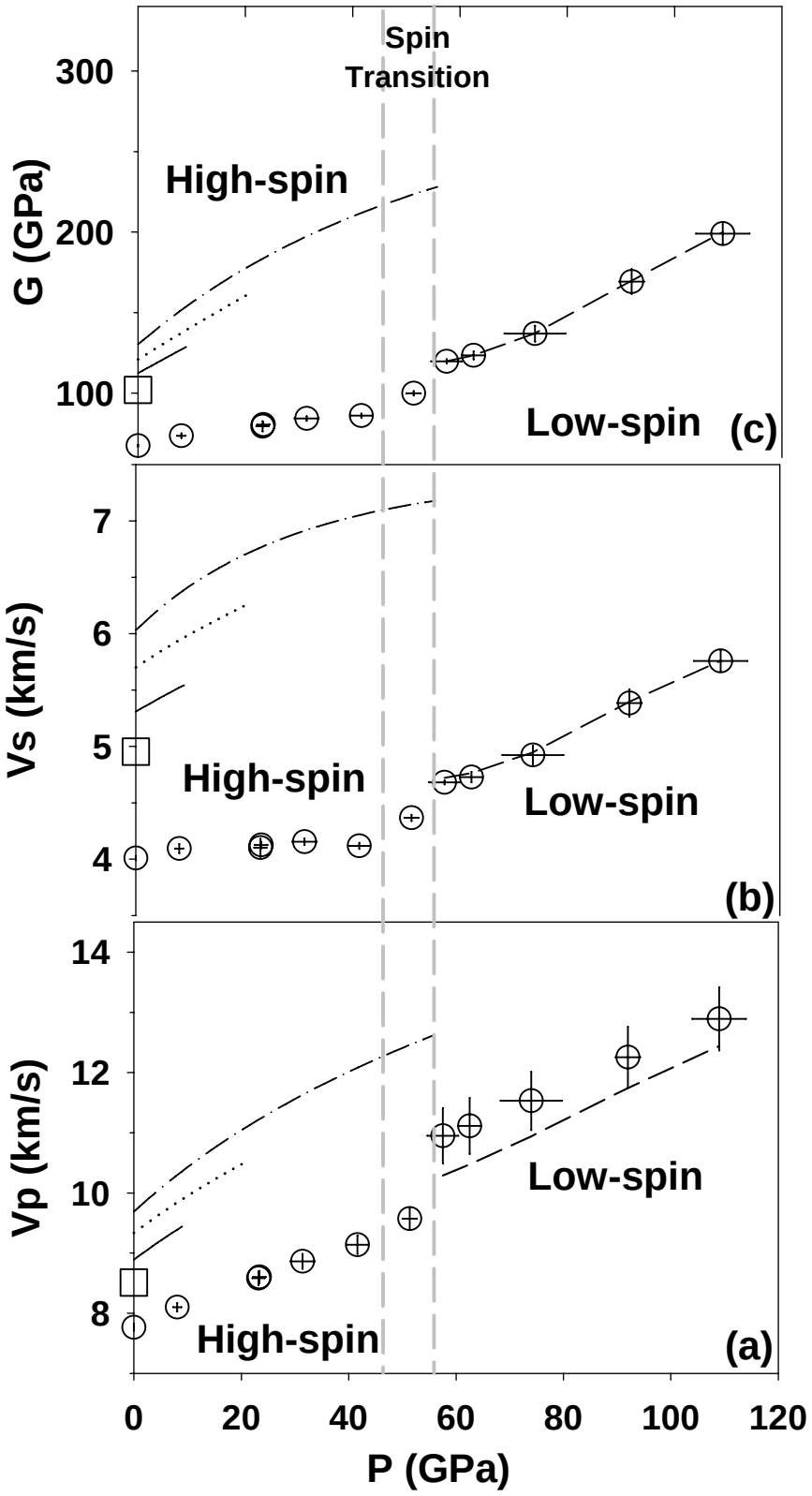
Spin
Transition
300
200
100
G (GPa)
High-spin
Low-spin
(c)
7
6
5
4
Vs (km/s)
High-spin
Low-spin
(b)
14
12
10
8
Vp (km/s)
Low-spin
High-spin
(a)
0
20
40
60
80
100
120
P (GPa)

Figure 2